

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Eschenburg
Serial No.: 10/725,885
Filed: December 2, 2003
Group Art Unit: 3682
Examiner: Kim, Chong Hwa
Title: MODULAR BEARING CAGE WITH INTEGRATED
LUBRICATION PUMP

Mail Stop – Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF

Dear Sir:

Appellant submits this Reply to Examiner's Answer mailed February 12, 2008. No additional fees are believed due; however, the Commissioner is authorized to charge any additional fees to Deposit Account No. 50-1482 in the name of Carlson, Gaskey & Olds.

ARGUMENT

(1) Claims 1-3, 6, 9-11, 22-24 and 27-29 rejected as being anticipated by Ries.

Claim 1

The Examiner argues that the supply passages disclosed in Ries communicate with the lubricant in the sump through lines 156,150 that extend outside of the housing as are shown in Figure 1. This ignores part of the claim limitation that requires that a cavity defines a supply passage communicating lubricant from a sump within the axle housing. The passages in the Reis pump housing are for attachment to the supply lines. The pump housing is not in communication with a sump. The features cited by the Examiner are simple connection points for the supply lines that carry lubricant to and from the oil pump. Appellant requests reversal of this rejection.

Claim 24

Claim 24 requires a bearing member supported within the pump housing separate from the axle housing for supporting rotation of said input shaft. The claim limitation requires that the bearing member be supported within the pump housing separate from the axle housing.

The Ries device includes bearings 38 and 39 that support rotation of the shaft 35. The bearings 38 and 39 are supported within the axle housing 30. The Ries pump housing includes elements 112 and 114. The Examiner seeks to also read element 115 as part of the pump housing. However, as is clearly shown in Figure 5 of Ries, the element 115 is disposed within and supported within the axle housing 30. Claim 24 includes the specific limitation that the bearings are supported within the pump housing and separate from the axle housing. In this case removal of the Reis pump 130,134,135 and pump housing 114 and 112 would not require removal of the element 115 that supports the bearings. If the bearings 38 and 39 and element 115 can remain within the housing 30 with the pump removed, it cannot be part of the pump housing, and certainly is not supported separate from the axle housing.

For this reason, the disclosures in Ries cannot anticipate claims 24. Appellant requests reversal of this rejection.

Claim 27

Claim 27 requires an inlet in communication with a sump within the axle housing and a cavity defining a supply passage within the pump housing from the inlet to the pump. This limitation clearly requires that the entire passage from the inlet to the pump be included within the pump housing. The Ries device utilizes many oil lines to communicate lubricant to the pump and therefore the entire passage is not disposed within the pump housing as the claim requires.

Further, claim 24 from which claim 27 depends requires that the passage extend within the pump housing from the inlet to the pump. The various lubricant lines do not extend within the pump housing and therefore cannot anticipate this limitation.

Claim 28

Claim 28 requires that the pump housing include an elongated section including an inlet and the cavity that defines the supply passage is within the elongated section. The Examiner is reading element 112 as an elongated portion. Element 112 as clearly shown in Figure 2 is circular without any elongated portions. The Examiner argues that the circular element is elongated. However, nothing disclosed in Reis supports this reading. Further, the claim requires that the elongated portion include the inlet and the cavity. Clearly these features are not in any elongated portion of the element 112. Accordingly, Appellant requests reversal of the rejection to claim 28.

(2) Claims 1-6, 9-11, 22, and 24-28 rejected as being anticipated by Aikawa.

Claim 1

Examiner argues that broadly read the two Aikawa axle housing parts 11 and 13, (Aikawa Figure 1) discloses the claimed axle housing and pump housing. Appellant disagrees.

The Aikawa reference discloses a combination gear casing part 11 and differential carrier 13 that are bolted together as shown in Figure 1 to define an internal space that supports several different axles and other driveline components, but no pump housing as is required by the claims.

Further, claim 1 includes the limitation that the pump housing is attachable to cover an opening within the axle housing. The differential carrier 13 can hardly be read as covering an opening as it defines a substantial portion of the shape and boundaries of the internal open space. The Examiners reading requires that the entire half of the Aikawa axle housing be read as an opening. Such a reading is simply beyond what one skilled in the art would recognize the claim limitations to cover.

Claim 1 further requires that the pump housing includes a cavity defining a supply passage for communicating lubricant from a sump within the axle housing to the pump. The Aikawa differential carrier 13 does not include such a feature. Further, this feature would not be

necessary in the Aikawa device as the pump is disposed completely within the internal space and is therefore in direct communication with the sump. For these reasons Appellant requests reversal of the rejection to claim 1 as being anticipated by Aikawa et al.

Claim 24

Claim 24 requires a pump housing attached to an axle housing over an opening in the axle housing. The examiner reads an entire half of the axle housing as the claimed pump housing. As appreciated, such a reading requires that the entire half of the axle housing be read as the claimed opening. As discussed above this reading is outside that which one skilled in the art would reasonable recognize as the claimed opening.

Claim 24 further requires a bearing member supported within the pump housing separate from the axle housing. In Aikawa et al. a bearing 55 (Figure 1) is supported within the inner space defined by the axle housing part 11 and the differential carrier 13. The axle housing parts are simple not part of a pump housing.

Claim 27

Claim 27 requires that an inlet is in communication with a sump within the axle housing and a cavity defining a supply passage within the pump housing from the inlet to the pump. The examiner argues that this is inherently present. However, the claim is very clear that a cavity within the housing define a supply passage. No portion of the supply passage is disposed within the differential carrier 13 of Aikawa et al. If the differential carrier 13 is removed from the axle housing 11, there would be no cavity present that meets the claimed limitations. Only from a strained reading of the entire assembly does the examiner find the claimed features. The claim is clear that the pump housing include a cavity for communicating lubricant. The Aikawa et al. device operates within the axle housing and as such does not require the claimed cavity and the reading argued by the examiner is counter to the disclosed configuration and operation of Aikawa et al., and is not supported by the disclosures of Aikawa et al.

Claim 28

The examiner argues that the claimed feature of an elongated section is inherent in the Aikawa et al device. This simply is not the case. Further, the claim requires that the elongated section include the inlet and cavity as recited in claim 27. These features are simply not present in the Aikawa et al. device as they are not required for the very different operation and configuration disclosed in the Aikawa et al. device. For this reason Appellant requests reversal of this rejection.

CONCLUSION

For the reasons set forth above, the rejection of claims 1-11 and 22-29 is improper and should be reversed. Appellant earnestly requests such an action.

Respectfully Submitted,

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